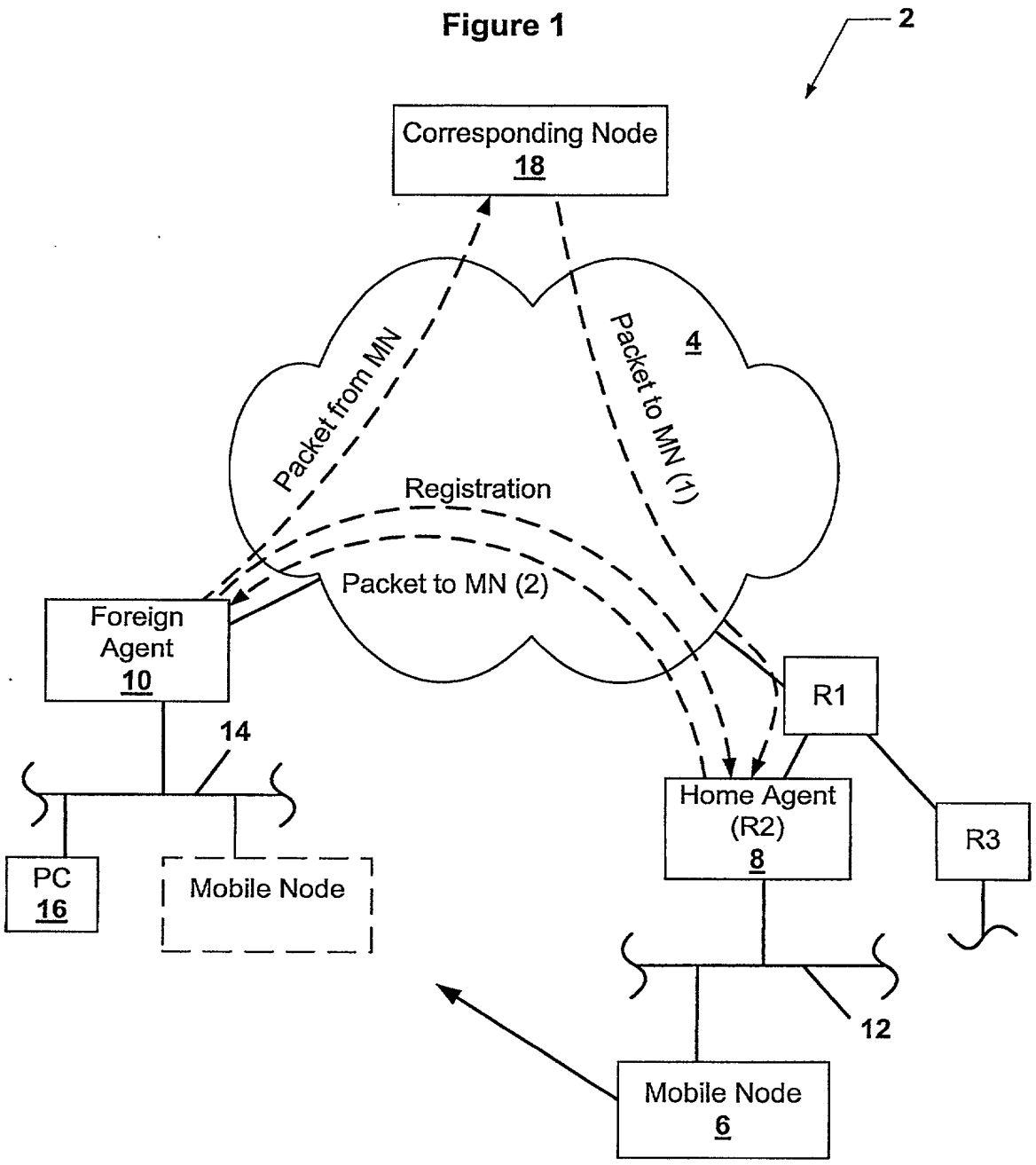
Figure 1


2
Corresponding Node
18
4
Packet from MN
Packet to MN (1)
Registration
Packet to MN (2)
Foreign
Agent
10
R1
14
Home Agent
(R2)
8
R3
PC
16
Mobile Node
12
Mobile Node
6

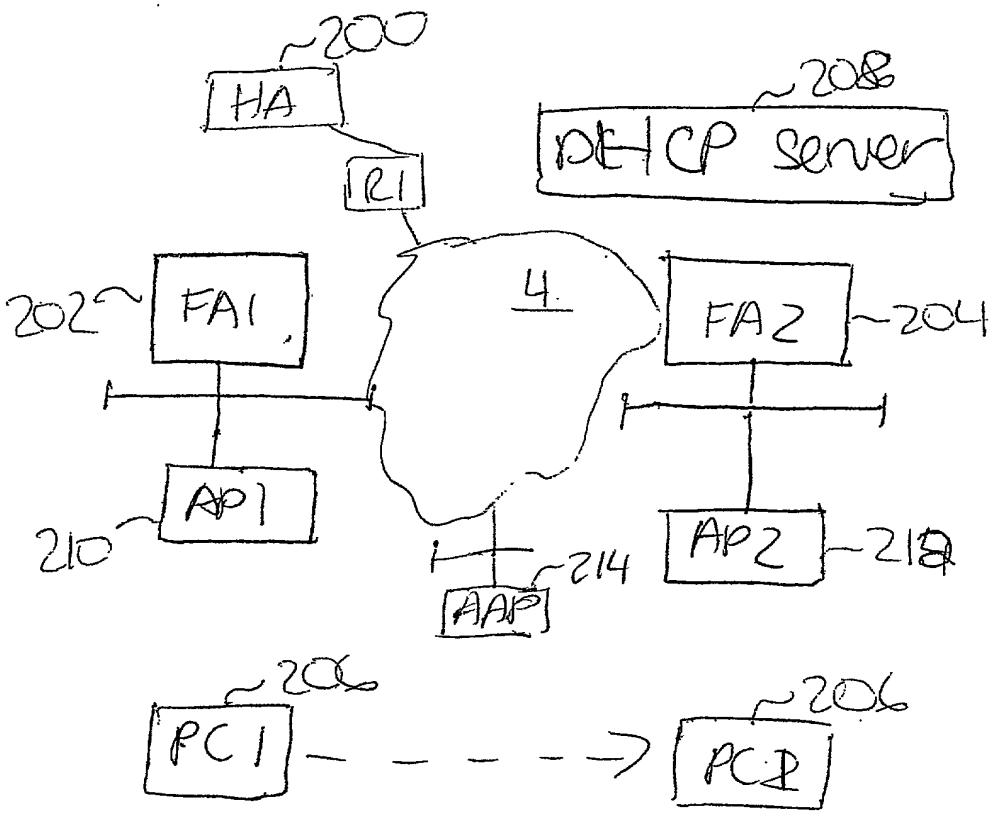

200
HA
208
DHCP Server
IR1
4
202
FA1
FA2
204
AP1
210
AP2
212
214
AAP
206
PC1
206
PC2

FIG. 2

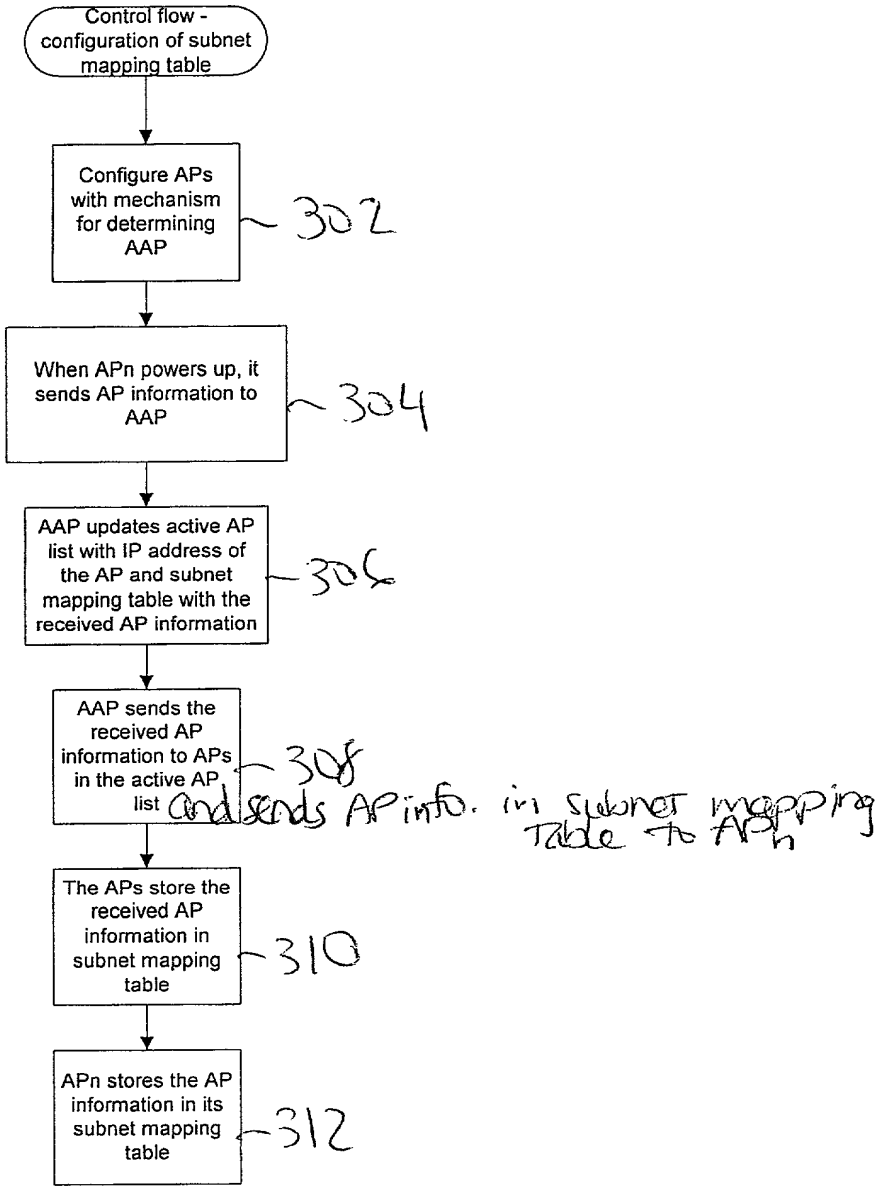

Control flow - configuration of subnet mapping table
Configure APs with mechanism for determining AAP
302
When APn powers up, it sends AP information to AAP
304
AAP updates active AP list with IP address of the AP and subnet mapping table with the received AP information
306
AAP sends the received AP information to APs in the active AP list
308
and sends AP info. in subnet mapping Table to APn
The APs store the received AP information in subnet mapping table
310
APn stores the AP information in its subnet mapping table
312

FIG. 3

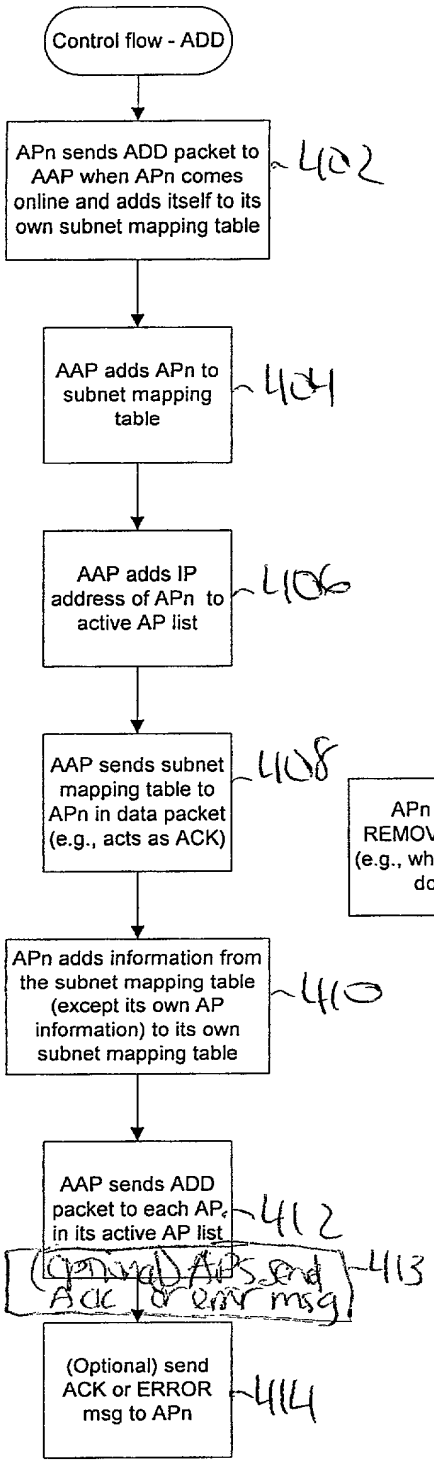


FIG. 4A

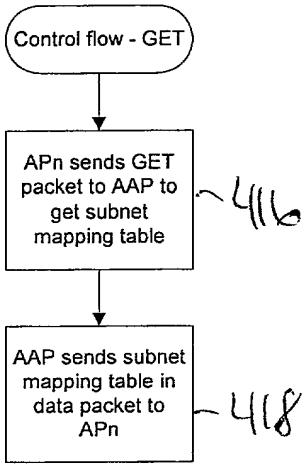


FIG. 4B

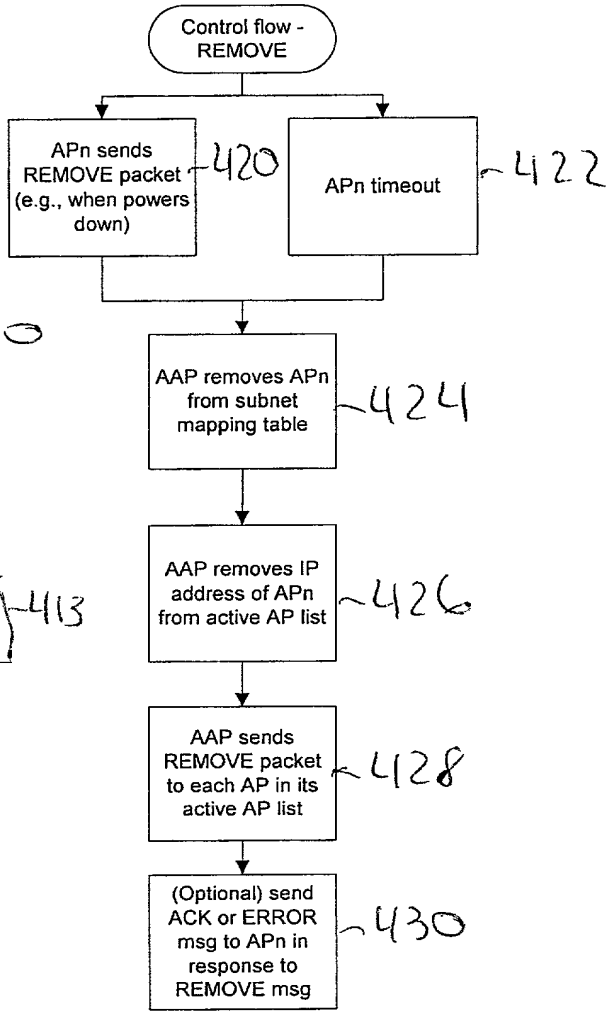


FIG. 4C

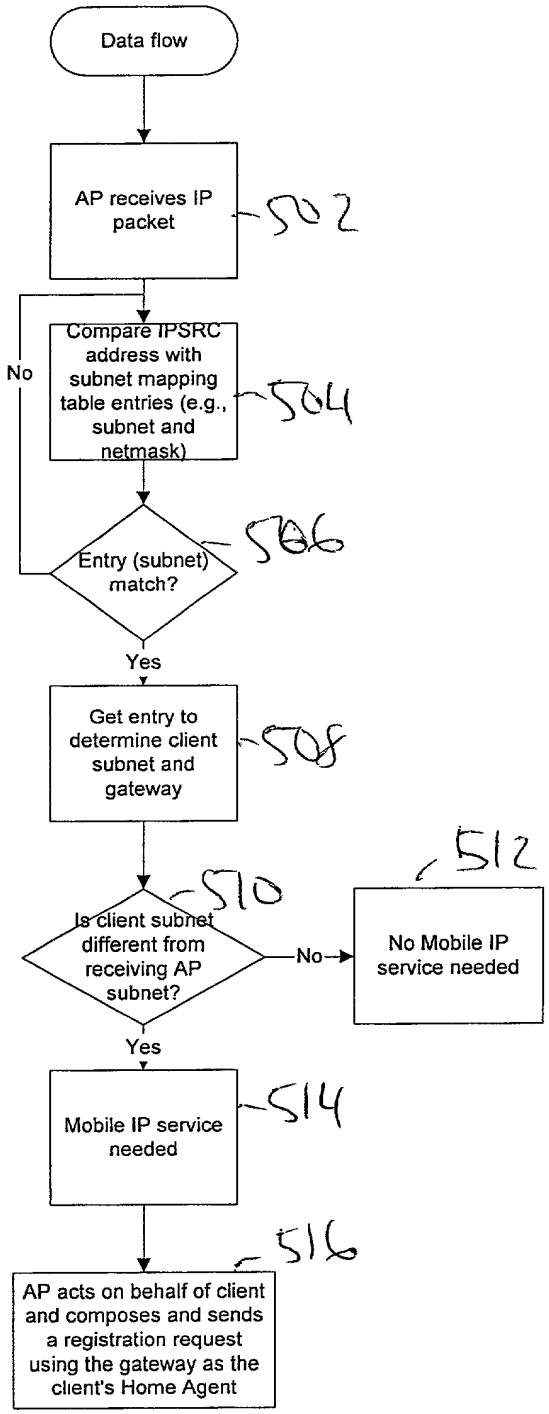

Data flow
AP receives IP packet
502
Compare IPSRC address with subnet mapping table entries (e.g., subnet and netmask)
504
No
Entry (subnet) match?
506
Yes
Get entry to determine client subnet and gateway
508
Is client subnet different from receiving AP subnet?
510
No
No Mobile IP service needed
512
Yes
Mobile IP service needed
514
AP acts on behalf of client and composes and sends a registration request using the gateway as the client's Home Agent
516

FIG. 5

602

Subnet mapping table

Subnet (604)	netmask (606)	gateway (608)	AP IP address (610)

FIG. 6

Active AP list 702

AP1 IP address (704)
AP2 IP address
.
.
APN IP address

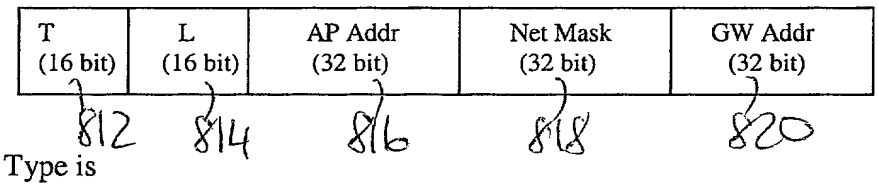
FIG. 7

Attorney Docket No. 020375-000200US

changed AP. This AAP will send to all the APs the new entry using the ADD packet.

2.5.5 Packet Format

Unicast UDP will be the mechanism of choice for this. TLVs will be used within these packets for data. Right now there will only be one Type but this method allows for different uses of this packet format in the future.



The Type is

1 - Subnet Map Information

The ADD packet

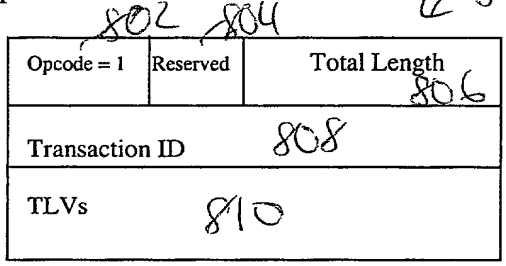


FIG. 8

The REMOVE packet

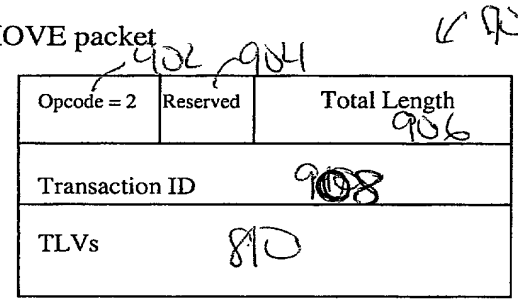


FIG. 9

The GET requests packet.

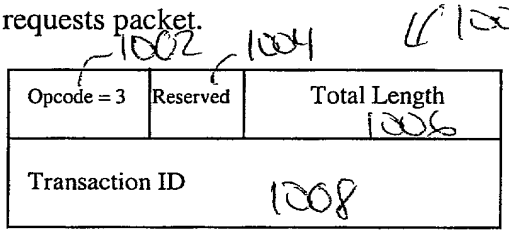


FIG. 10

A printed version of this document is an uncontrolled copy.

DATA packets 1100

Opcode = 4 1102	Reserved 1104	Total Length 1106
Transaction ID 1108		
TLVs 810		

FIG. 11

ACK packets 1200

Opcode = 5 1202	Reserved 1204	Total Length 1206
Transaction ID 1208		

FIG. 12

ERROR packets 1300

Opcode = 6 1302	Error Code 1304	Total Length 1306
Transaction ID 1308		
Error String 1310		

FIG. 13

20020194369 - 12-19-2002

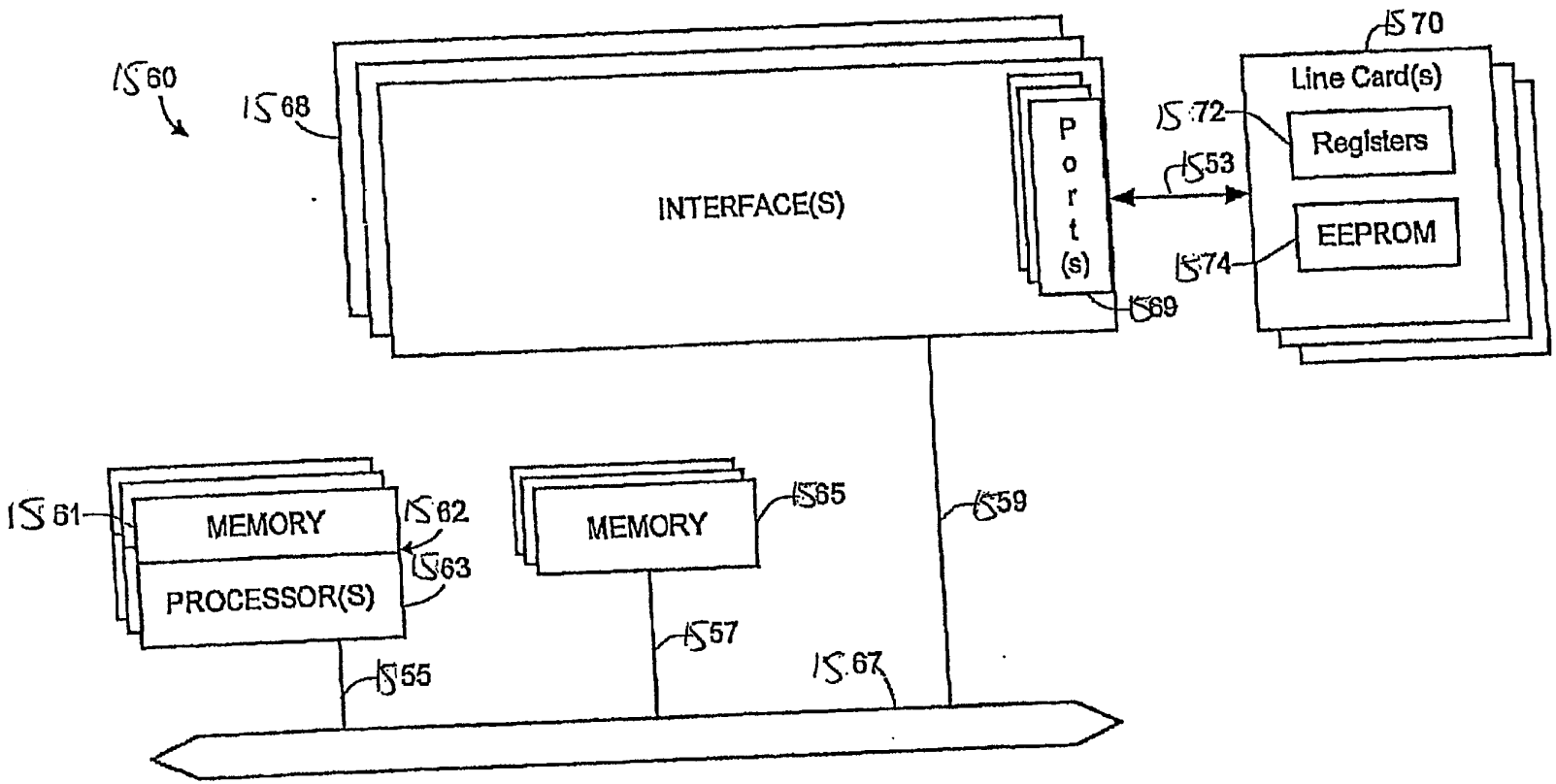

1560
1568
INTERFACE(S)
Port(s)
1569
1570
Line Card(s)
1572
Registers
1553
EEPROM
1574
1561
MEMORY
PROCESSOR(S)
1562
1563
1565
MEMORY
1559
1557
1555
1567

Figure 14